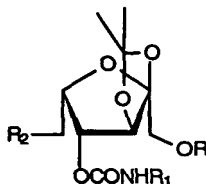


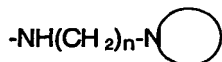
CLAIMS

1. Compounds having the structure of Formula I:



FORMULA I

and their pharmaceutically acceptable salts, esters, enantiomers, diastereomers, N-oxides, amides, prodrugs, metabolites or polymorphs, wherein R is C₁ to C₁₅ alkyl, alkene, alkyne (straight chain or branched), aryl, substituted aryl or alkylaryl and R₁ is phenyl o-, m- or p-chlorophenyl, tolyl, methoxyphenyl or nitrophenyl and R₂ is H, pyrrolidinyl, piperidinyl, morpholinyl or hexamethyleneimino or a radical of the formula NHR₃, wherein R₃ is C₁ to C₁₅ alkyl, alkene or alkyne (straight chain or branched) or a radical of Formula III:



FORMULA III

wherein n is a whole number up to 5 and



is a five-, six- or seven-membered heterocyclic ring containing one or more heteroatoms.

2. The compounds of claim 1, wherein
-

is pyrrolidinyl, piperidinyl, morpholinyl or hexamethyleneimino.

3. Compounds according to claim 1 selected from the group consisting of:

5 2,3-O-Isopropylidene-1-O-decyl-4-(methylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-dodecyl-4-(methylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

10 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-
deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

15 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-
deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-
6-pyrrolidinyl- α -L-xylo-2-hexulofuranose

20 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-
pyrrolidinyl- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-morpholiny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-morpholiny- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-decyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-morpholiny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-morphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-piperidiny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-piperidiny- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-decyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-piperidiny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-
6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-
hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-
deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-
hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-
ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-
deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-
ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-
deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-
6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-
ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-
ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-
ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylpyrrolidinyl- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-decyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylpiperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(phenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(phenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-decyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-dodecyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(phenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-chlorophenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-heptyl-4-(p-tolylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-methoxyphenylcarbamate)-6-deoxy-6-ethylmorphiliny- α -L-xylo-2-hexulofuranose

- 2,3-O-Isopropylidene-1-O-heptyl-4-(p-nitrophenylcarbamate)-6-deoxy-6-ethylmorpholinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(methylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 5 2,3-O-Isopropylidene-1-O-dodecyl-4-(methylcarbamate)-6-deoxy-6-morpholinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(methylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 10 2,3-O-Isopropylidene-1-O-dodecyl-4-(methylcarbamate)-6-deoxy-6-(2-ethylpyrrolidinyl)- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-dodecyl-4-(methylcarbamate)-6-deoxy-6-(2-ethylmorpholinyl)- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(methylcarbamate)-6-deoxy-6-morpholinyl- α -L-xylo-2-hexulofuranose
- 15 2,3-O-Isopropylidene-1-O-decyl-4-(methylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(methylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-decyl-4-(methylcarbamate)-6-deoxy-6-(2-ethylpyrrolidinyl)- α -L-xylo-2-hexulofuranose
- 20 2,3-O-Isopropylidene-1-O-decyl-4-(methylcarbamate)-6-deoxy-6-(2-ethylmorpholinyl)- α -L-xylo-2-hexulofuranose
- 2,3-O-Isopropylidene-1-O-heptyl-4-(methylcarbamate)-6-deoxy-6-pyrrolidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-heptyl-4-(methylcarbamate)-6-deoxy-6-morpholinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-heptyl-4-(methylcarbamate)-6-deoxy-6-hexamethyleneimino- α -L-xylo-2-hexulofuranose

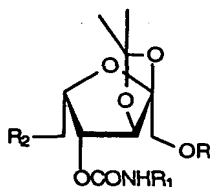
5 2,3-O-Isopropylidene-1-O-heptyl-4-(methylcarbamate)-6-deoxy-6-piperidinyl- α -L-xylo-2-hexulofuranose

2,3-O-Isopropylidene-1-O-heptyl-4-(methylcarbamate)-6-deoxy-6-(2-ethylpyrrolidinyl)- α -L-xylo-2-hexulofuranose

10 2,3-O-Isopropylidene-1-O-heptyl-4-(methylcarbamate)-6-deoxy-6-(2-ethylmorpholinyl)- α -L-xylo-2-hexulofuranose.

4. A pharmaceutical composition comprising a pharmaceutically effective amount of a compound as defined in claims 1, 2 or 3 and a pharmaceutically acceptable carrier.

15 5. A process, according to claim 1, for preparing compounds of Formula I:

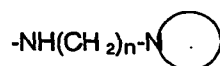


20 FORMULA I

and their pharmaceutically acceptable salts, esters, enantiomers, diastereomers, N-oxides, amides, prodrugs, metabolites or polymorphs, wherein R is C₁ to C₁₅ alkyl, alkene, alkyne (straight chain or branched), aryl, substituted aryl or alkylaryl and R₁ is phenyl o-, m- or p-chlorophenyl, tolyl, methoxyphenyl or nitrophenyl and R₂ is H,

25

pyrrolidinyl, piperidinyl, morpholinyl or hexamethyleneimino or a radical of the formula NHR_3 , wherein R_3 is C_1 to C_{15} alkyl, alkene or alkyne (straight chain or branched) or a radical of Formula III:

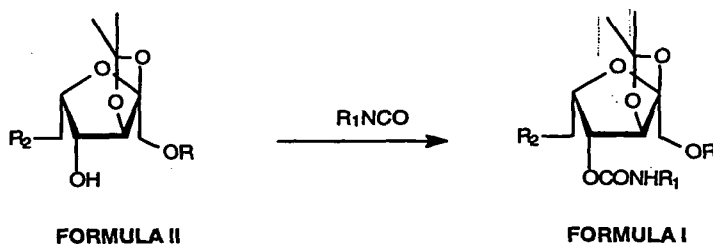


FORMULA III

wherein n is a whole number up to 5 and



is a five-, six- or seven-membered heterocyclic ring containing one or more heteroatoms, by treating the compound of Formula II with a suitable isocyanate and in a suitable solvent at low temperature as follows:

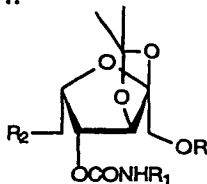


6. A process according to claim 5, wherein



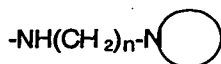
is pyrrolidinyl, piperidinyl, morpholinyl or hexamethyleneimino.

7. The method of preventing, inhibiting or suppressing cell adhesion in an animal comprising administering to said animal, a compound having the structure of Formula I:



FORMULA I

and its pharmaceutically acceptable salts, esters, enantiomers, diastereomers, N-oxides, amides, prodrugs, metabolites, or polymorphs, wherein R is C₁ to C₁₅ alkyl, alkene, alkyne (straight chain or branched), aryl, substituted aryl or alkylaryl and R₁ is phenyl, o-, m- or p-chlorophenyl, tolyl, methoxyphenyl or nitrophenyl and R₂ is H, pyrrolidinyl, piperidinyl, morphilinyl or hexamethyleneimino or a radical of the formula NHR₃, wherein R₃ is C₁ to C₁₅ alkyl, alkene or alkyne (straight chain or branched) or a radical of Formula III:



FORMULA III

in which n is a whole number up to 5 and



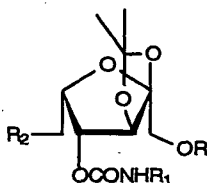
is a five-, six- or seven-membered heterocyclic ring containing one or more heteroatoms.

8. The method of claim 7, wherein



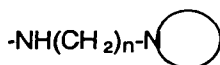
is pyrrolidinyl, piperidinyl, morpholinyl or hexamethyleneimino moieties.

- 5 9. A method for treating an animal suffering from bronchial asthma, rheumatoid arthritis, multiple sclerosis, type I diabetes, psoriasis, allograft rejection, and other inflammatory and/or autoimmune disorders in an animal comprising administering to said animal a compound of the structure of Formula I:



FORMULA I

- 15 wherein R is C₁ to C₁₅ alkyl, alkene, alkyne (straight chain or branched), aryl, substituted aryl or alkylaryl and R₁ is phenyl, o-, m- or p-chlorophenyl, tolyl, methoxyphenyl or nitrophenyl and R₂ is H, pyrrolidinyl, piperidinyl, morphilinyll or hexamethyleneimino or a radical of formula NHR₃, wherein R₃ is C₁ to C₁₅ alkyl, alkene or alkyne (straight chain or branched) or a radical of Formula III:



FORMULA III

- 25 in which n is a whole number up to 5 and



is a five-, six- or seven-membered heterocyclic ring containing one or more heteroatoms.

- 5 10. The method of claim 9, wherein



is pyrrolidinyl, piperidinyl, morpholinyl or hexamethyleneimino.

- 10 11. The method of preventing, inhibiting or suppressing cell adhesion in an animal comprising the step of administering to said animal the pharmaceutical composition according to claim 4.

12. The method according to claim 7 wherein said method is used for preventing, inhibiting or suppressing cell adhesion-associated inflammation.

13. The method according to claim 7 wherein said method is used for preventing, inhibiting or suppressing a cell adhesion-associated immune or autoimmune response.

14. The method according to claim 7 or 9 wherein said method is used to treat or prevent a disease selected from the group consisting of asthma, arthritis, psoriasis, allograft rejection, multiple sclerosis, diabetes and inflammatory bowel disease.